

OVERVIEW

The **CM** family of ceiling mount occupancy sensors provide a range sensor solutions for applications with finished ceilings (e.g. ceiling tiles, sheetrock, plaster). **CM** family sensors utilize 100% digital Passive Infrared (PIR) detection and are available with several lens options, providing flexibility for multiple mounting height and coverage pattern requirements. Dual technology (**PDT**) occupancy detection can also be added as an option for applications where occupants are stationary for long periods of time.

FEATURES

- 360° coverage pattern
- Push- button programmable, adjustable time delays, and multiple operating modes
- 100 hr lamp burn-in timer
- No field calibration or sensitivity adjustments required
- Convenient test mode
- Green LED indicator

SPECIFICATIONS

Size:	4.55" diameter and 1.55" deep
Weight:	6 oz
Mounting:	3.5" octagon box, ceiling tile surface, single gang box
Color:	White
Operating Voltage:	12-24 VAC/VDC
Current Draw:	Standard 4 mA, w/ R option 16 mA
Dimming Load:	Sinks <20 mA; ~40 Ballasts @ .5 mA each
Rcmd. Power Pack:	PP20
ROHS compliant	

AcuityControls

Sensor Switch™

CM
CM PDT



Warranty

Five-year limited warranty. Complete warranty terms located at:

www.acuitybrands.com/CustomerResources/Terms_and_conditions.aspx

Note: Actual performance may differ as a result of end-user environment and application.

Specifications subject to change without notice.



ORDERING INFORMATION

CM Family					Example: CM PDT 11 R LT
Series	Detection Technology	Coverage Type	Relay	Additional Features (choose 1)	Temp / Humidity
CM Ceiling Mount Sensor	[blank] PIR PDT* Dual Technology (PIR/ Microphonics)	6 High Bay 360° 9 Small Motion 360° 10 Large Motion 360° 11 Hallway	[blank] None R Low Voltage Relay	[blank] None D Occupancy Controlled Dimming P Photocell ADC** Photocell w/ Dimming	[blank] Standard LT Low Temp/ High humidity

* **PDT** option not available on **CM 6** models

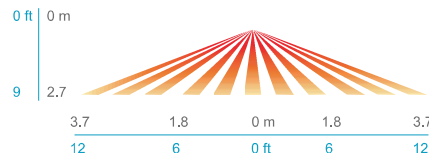
** **ADC** option not available on **CM6** models

COVERAGE PATTERNS

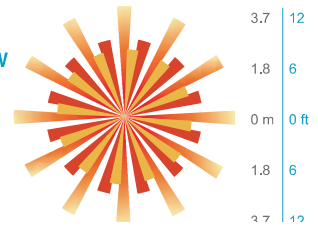
SMALL MOTION 360 (Model # CM 9/ CM PDT9¹)

- Best choice for small motion (e.g. hand movements) detection
- 360° conical shaped pattern
- Provides 12 ft (3.66 m) radial coverage (~500 ft²) when mounted to standard 9 ft (2.74 m) ceiling
- 8 to 15 ft (2.44 to 4.57 m) mounting heights provide 10 to 20 ft (3.05 to 6.10 m) radial coverage
- Lens assembly is marked with a gray ring around lens to differentiate versus the #10 lens

SIDE VIEW



TOP VIEW

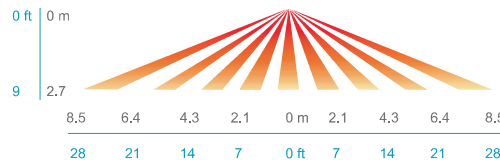


¹ Sensors with Microphonics™ provides overlapping detection of human activity over the complete PIR coverage area. Advanced filtering is also utilized to prevent non-occupant noises from keeping the lights on.

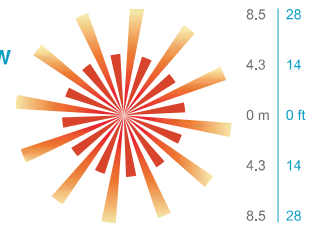
LARGE MOTION 360 (Model # CM 10/ CM PDT10¹)

- Best choice for large motion detection (e.g. walking)
- 360° conical shaped pattern
- Provides ~24 ft (7.32 m) radial coverage (~2000 ft²) when mounted at 9 ft (2.74 m)
- 7 to 15 ft (2.13 to 4.57 m) mounting heights provide 16 to 36 ft (4.88 to 10.97 m) radial coverage
- Detection range improves when walking across beams compared to into beams

SIDE VIEW



TOP VIEW

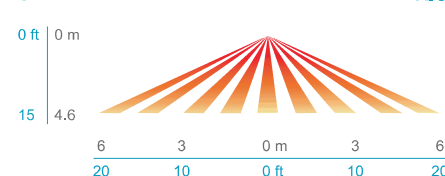


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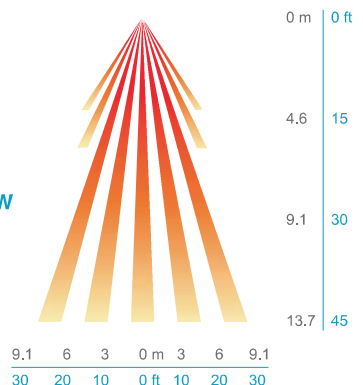
HIGH MOUNT 360 (Model # CM 6)

- Best choice for 15 to 45 ft (4.57 to 13.72 m) mounting heights
- 15 to 20 ft (4.57 to 6.10 m) radial coverage overlaps area lit by a typical high bay fixture
- Excellent detection of large motion (e.g. walking) up to 35 ft (10.76 m)
- Excellent detection of extra large motion (e.g. forklifts) up to a 45 ft (13.72 m)

LOW VIEW



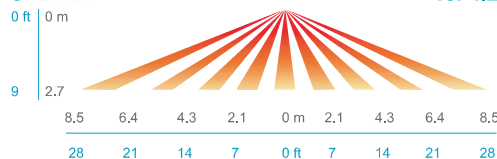
HIGH VIEW



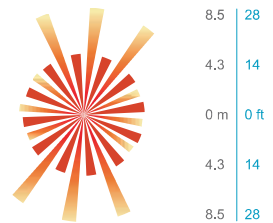
HIGH MOUNT HALLWAY (Model # CM 11/CM PDT11¹)

- Best choice for large motion detection
- Provides 28 ft (8.53 m) of coverage when mounted to standard 9 ft (2.74 m) ceiling
- 7 to 15 ft (2.13 to 4.57 m) mounting heights provide 16 to 36 ft (4.88 to 10.97 m) hallway coverage

SIDE VIEW



TOP VIEW



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WIRING (DO NOT WIRE HOT)

STANDARD WIRING

RED - Power Input (12-24 VAC/VDC)

BLACK - Common

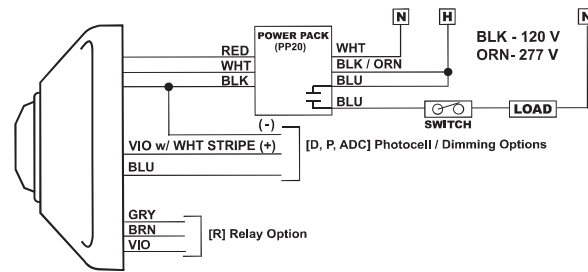
WHITE - Occupancy State (high VDC for occupied)

PHOTOCELL/DIMMING OPTIONS (D, P, ADC)

BLUE - Direct output to power pack for providing photocell control and/or secondary dim time out. Output is high VDC with occupancy & low light. Output also held high during secondary dim time out. For multi-level control, use two power packs and connect White wire to primary load and Blue to daylight load.

VIOLET w/ WHITE STRIPE - Connect to 0-10 VDC control wire (typically Violet) from 0-10 VDC dimmable ballast

GRAY from Ballast - Connect to sensor Black wire



RELAY OPTION (R)

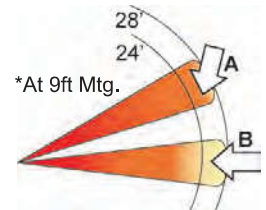
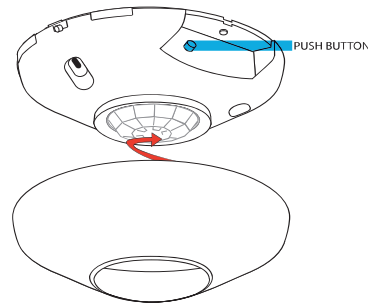
GRAY / BROWN - Connected during occupied state

VIOLET / BROWN - Connected during unoccupied state

Note: Relay is energized during unoccupied state

INSTALLATION

- Mount sensor directly to a ceiling tile or a metallic grid (two self-tapping screws provided).
- Sensor's mounting holes also align with 3.5" octagon or single gang handy box (screws not provided).
- Sensor will detect motions crossing segments more effectively than motions parallel to beams.
- For optimal detection, position sensor such that segments are crossed upon entrance and unable to view outside the space.
- **PDT** models: For maximum Microphonics sensitivity avoid locating sensor near HVAC air diffusers



A: When walking across beam, detection will occur at approximately 28 feet. (8.53 m)

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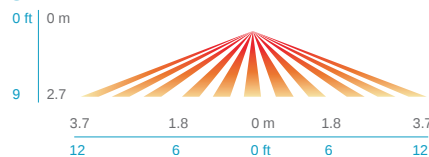
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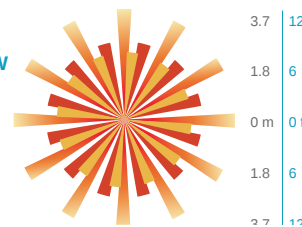
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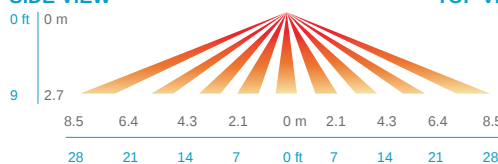


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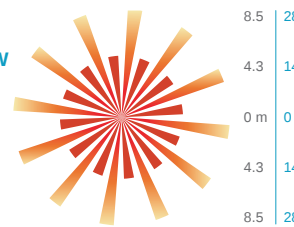
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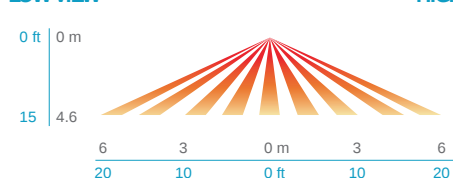


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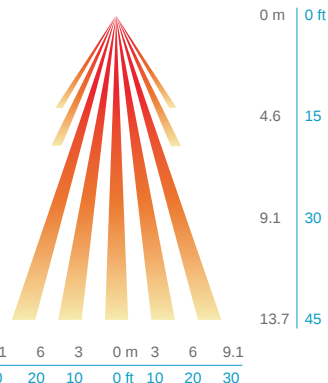
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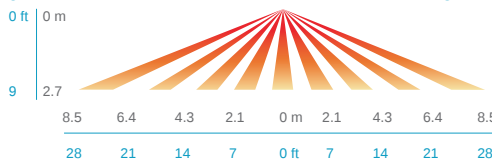
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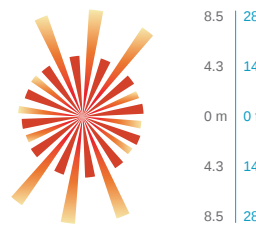
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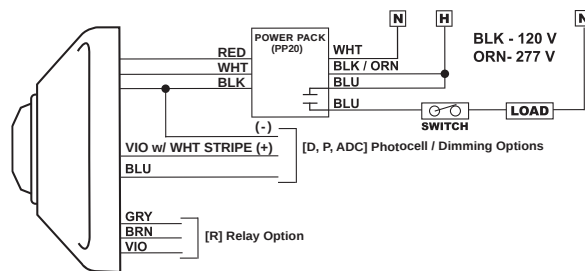
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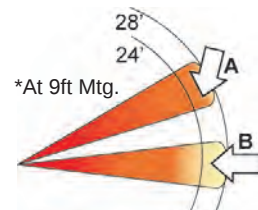
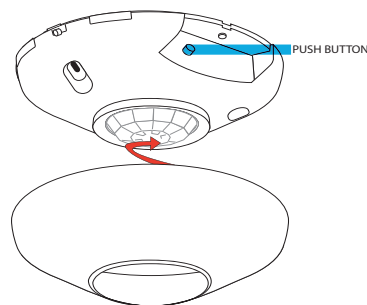
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Drawing Designation: Example User Interface Screenshots

Webster University - Interdisciplinary Science Building Lighting Controls

470 E. Lockwood Ave.
Webster Groves, MO 63119

As Prepared By:



Automatic Controls Equipment Systems, Inc.

11088 Gravois Industrial Court
St. Louis, MO, 63128
T: (314) 722-2727 F: (314) 722-2728

PROJECT TEAM

Client Name:	Webster University
Owner:	Webster University
Architect:	N/A
MEP Engineer:	N/A
Consulting Engineer:	N/A
Construction Manager:	N/A
General Contractor:	N/A
Mechanical Contractor:	N/A
ALC Design Engineer:	Paul Lane
ALC Project Manager:	Mike Manzelli
Project Number:	WU-02-16
Drawing Date:	7/28/2016

St. Louis, MO, 63128

T: (314) 722-2727 F: (314) 722-2728

Project Name: Webster University - Interdisciplinary Science Building Lighting Controls

Project Number: WU-02-16

Drawing Designation: Submittal

Drawing Date: 7/28/2016

<u>Page</u>	<u>Manufacturer</u>	<u>Part Number</u>	<u>Part Description</u>
2	Acuity Controls	CM-PDT-9-R	Ceiling Mount Occupancy Sensor, Dual Technology (PIR/Microphonics), Small Motion 360°, Low Voltage
5	Acuity Controls	WV-16-R	Wide View Occupancy Sensor, PIR, w/ Low Voltage Relay
7	Acuity Controls	WV-PDT-16-R	Dual Technology Wide View Occupancy Sensor w/ Low Voltage Relay
9	Automated Logic	AMR	ARCnet to MS/TP Router
11	Blue Ridge Technologies	CTS1CH-WH	Capacitive Touch Station, 1 Channel, White (wallplate not included)
11	Blue Ridge Technologies	CTS1RL-WH	Capacitive Touch Station, 1 Raise/Lower, White (wallplate not included)
11	Blue Ridge Technologies	CTS3PR-WH	Capacitive Touch Station, 3 Preset, White (wallplate not included)
11	Blue Ridge Technologies	CTS2RL-WH	Capacitive Touch Station, 2 Raise/Lower, White (wallplate not included)
13	Blue Ridge Technologies	LS24O	Light Level Sensor, 10VDC, Indoor, 0-50FC, Recessed Ceiling Mount
15	Blue Ridge Technologies	RPDS08-08-0-XO-10	Relay Panel Dimming Standard, 8 Relay Capacity
15	Blue Ridge Technologies	RPDS08-08-0-00-10	Relay Panel Dimming Standard, 8 Relay Capacity
17	Blue Ridge Technologies	RPDS16-16-4-X1-20	Relay Panel Dimming Standard, 16 Relay Capacity
19	Blue Ridge Technologies	SCDS-X1	Satellite, Dimming Standard, UL924, 120/277
21	Blue Ridge Technologies	SCDS-00	Satellite, Dimming Standard, 120/277
21	Blue Ridge Technologies	SCSS-00	Satellite, Switching Standard, 120/277
23	Blue Ridge Technologies	ZCDS-X1-00	Zone Controller, Dimming Standard, UL924, 120/277
25	Blue Ridge Technologies	ZCDS-00-00	Zone Controller, Dimming Standard, 120/277
27	IR-Tec	BPD-500-SR-L	IR-TEC Light Level Sensor, 10VDC Linear Photodiode, Indoor, 0-50FC, Recessed Ceiling Mount

Shop Drawing Submittal Review

Transmitted To: Cannon Design

Date: August 9, 2016

Attention: stl-cac@cannondesign.com

Contact Person / WTA Field Inspector:
Patrick Garner

Project Name: Webster University-**ISB**

Reviewed by: Mark de la Fuente

Project No. WT 14127.01

☐

UPS

☐

Courier

☒

Email

Copies	No.	Description
1 PDF	265700E01A	(Submittal No.'s) (R&B CxSRC)
		(Cannon #2605700-002 REV001) – (Paric #15051-) – (WES #607)
		• Lighting Controls Product Data REV1

***Remarks: Please see PAGE 2 for remarks.**

c: **Kelvin Patel**
Kpatel@cannondesign.com

☐ Furnish as Submitted

☒ ***Furnish as Noted**

☐ Rejected

☐ Revise & Resubmit

☐ Not Reviewed

☐

Corrections or comments made on shop drawings during this review do not relieve contractor from compliance with requirements of drawings and specifications. This check is only for review of general conformance with the design concept of project and general compliance with information given in contract documents. Contractor is responsible for: confirming and correlating all quantities and dimensions; selecting fabrication processes and techniques of construction; coordinating his work with that of all other trades; and performing his work in a safe and satisfactory manner.

Shop Drawing Submittal Review

***Submittal Review Comments**

1. Configure lighting control system to energize emergency lights upon loss of normal power.
2. Per E0601, contractor shall coordinate a meeting between design team, owner, and lighting control system start up technician, to review sequence of operations. The intent of this meeting is to identify any programming open items that need to be resolved. And to answer any questions the technician might have regarding design intent.
3. Provide two extra "1RL" wall stations (one on stage and one in control 160B) to serve stage lighting in combination with "2RL" stations, as intended with "3RL" station callout shown on plans.
4. Level 01: Materials list calls for 2 light level sensors, but it is unclear where these are intended to go.
5. Area 2B: Missing light level sensor in Comp Lab 231.
6. Area 3B: Missing Office 311 and Commons 339.
7. Area 4B: Missing "4i" fixtures in main stairwell. Configure these fixtures to operate with "1m" fixtures in main stairwell.
8. Sequence of operations: Coordinate dim-warn settings with engineer.

From: STL-CAC <STL-CAC@CANNONDESIGN.COM>
To: 'Patrick Garner' <pgarner@wmtao.com>, WTASHOP <wtashop@wmtao.com>
CC: "Patel, Kelvin" <kpatel@CANNONDESIGN.COM>
Date: 8/2/2016 11:02 AM
Subject: Webster ISB - 26 5700-002 ~~REV002~~ **REV001**
Attachments: 265700-002 Lighting Controls Product Data REV1.pdf

Attached for review.

Melissa Pirtle
Construction Admin
[cid:image001.png@01D1ECAD.889AF8D0]
1100 Clark Ave
St. Louis, Missouri 63102
T 314.425.8797 * M
cannondesign.com



77 Westport Plaza
Suite 250
St. Louis, MO 63146

TRANSMITTAL

No. 15051-0163

Paric Corporation

PROJECT: 15051-Webster University Interdisciplinary Science Building

DATE: 08/01/2016

TO: Cannon Design
1100 Clark Ave
St Louis MO 63102

RE: Lighting Controls Product Data REV1

ATTN: Kelvin Patel

JOB: 15051

WE ARE SENDING:	SUBMITTED FOR:	ACTION TAKEN:
☐ Shop Drawings	☐ Approval	☐ Approved as Submitted
☐ Letter	☐ Your Use	☐ Approved as Noted
☐ Prints	☐ As Requested	☐ Returned After Loan
☐ Change Order	☐ Review and Comment	☐ Resubmit
☐ Plans		☐ Submit
☐ Samples	SENT VIA:	☐ Returned
☐ Specifications	☐ Attached	☐ Returned for Corrections
☒ Other: Product Data	☐ Separate Cover Via:	☐ Due Date:

<i>Item</i>	<i>Package</i>	<i>Code</i>	<i>Rev.</i>	<i>Copies</i>	<i>Date</i>	<i>Description</i>	<i>Status</i>
Submittal		265700-002	2		08/01/2016	Lighting Controls Product Data REV1	Submitted

NOTES:

CC:

Signed: _____
Devin Gates

Transmittal

To Paric Corporation

Date 7/29/16

Job Number 11317

Job Name Webster Univ. ISB Building

Attention Devin Gates

Transmittal Number 11317-012

We are sending you:

☒ Attached

☐ Under separate cover, the following:

☐ Preliminary Drawings

☐ Samples

☐ Construction Drawings

☐ Copy of Letter

☐ Specifications

☐ Other _____

Quantity	Drawing #	Date/Revision	Description
1			Submittal for Lighting Controls (Hardware &
			Wiring Diagram) - Spec Section 26 57 00

These are transmitted as checked:

☒ For Your Review & Comment

☐ Approved As Noted

☒ For Approval

☐ Returned For Corrections

☐ For Your File

☐ Approved As Submitted

☐ As Requested

☐

Copy:

Transmittal

Enclosure

Rick Branstetter

Signed: Rick Branstetter, Project Manager